UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/900,476	07/06/2001	Raymond Melkomian	690/9-1391	4152

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EXAMINER
GRAHAM, CLEMENT B

ART UNIT	PAPER NUMBER
3628	

DATE MAILED: 02/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/900,476	MELKOMIAN ET AL.
	Examiner	Art Unit	
	Clement B. Graham	3628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>06 July 2001</u>.
2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-32</u> is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) <u>1-32</u> is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1   The following is a quotation of the second paragraph of 35 U.S.C. 112:
The specification shall conclude with one or more claims particularly pointing out and distinctly
claiming the subject matter which the applicant regards as his invention.

3.   Claims 1, 21, are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

In particular, Claims 1, recites the word [" visually accurate"].

However this language fails to distinctly claim Applicant's invention because the scope

of the claim is unclear. Moreover the specification fails to clarify, the meaning of the

limitation. Appropriate correction is required.

In particular, Claims 1, 21, recites the word [" substantially"].

However this language fails to distinctly claim Applicant's invention because the scope

of the claim is unclear. Moreover the specification fails to clarify, the meaning of the

limitation. Appropriate correction is required.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102
of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject
matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art
to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-30, are rejected under 35 U.S.C. 103(a) as being unpatentable over

Lupien et al(Hereinafter Lupien U.S Patent 5, 845, 266 in view Brush, II, et al

(Hereinafter Brush, II US Patent 5, 884, 029).

As per claim 1, Lupien discloses a computer based virtual reality trading system

for trading financial products comprising: means for storing a substantially visually

accurate image of a trading floor (Note abstract and see column 3 lines 62-67 and

column 4 lines 1-67 and column 6 lines 30-39 and column 7 lines 5-15 and column 23 lines 20-65).

Lupien fail to explicitly teach means for storing a plurality of visual images, each of which corresponds to a visually accurate representation of one of a plurality of traders; and means for generating an interactive virtual trading floor space and for generating virtual trader personas corresponding to the virtual images of the plurality of traders therein and for supporting interactive trading between a plurality of the virtual trader personas; and, means for the plurality of traders to interact and complete trades via their virtual trader personas on the virtual trading floor.

However Brush, II, discloses using the example of the virtual shopping mall, lets assume that an avatar enters the virtual department store. Upon entering the department store his presence is detected by the virtual salesperson. This is implemented using VRML sensors. The salesperson is programmed to, upon detecting the entry of a potential customer, to approach the potential customer and collect information. The salesperson avatar will collect the outwardly observable characteristics of the potential customer avatar and pursue a course of action based on the conclusions drawn from the outwardly observable characteristics. In this example, the salesperson detects that the potential customer is an older middle-class male customer. This can be deduced from clothing choice, hair color or any other physical traits. Based on the salesperson avatar's programming, it will approach the potential customer avatar with a predetermined sales pitch for older males. This predetermined sales pitch may consist of mechanical moves and verbal moves. The predetermined sales pitch of the preferred embodiment begins with walking to within three feet of the potential customer, greeting the potential customer with a smile, saying "Hello, may I help you" and extending the hand for a handshake. The avatar could have been programmed, for example, to extend a hand for a handshake to a male but to engage in additional small-talk for a woman rather than extending a hand.(see column 7 lines 6-67 and column 8 lines 1-10).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Lupien to include storing a plurality

of visual images, each of which corresponds to a visually accurate representation of one of a plurality of traders; and means for generating an interactive virtual trading floor space and for generating virtual trader personas corresponding to the virtual images of the plurality of traders therein and for supporting interactive trading between a plurality of the virtual trader personas; and, means for the plurality of traders to interact and complete trades via their virtual trader personas on the virtual trading floor taught by Brush, II, in order to incorporate multiple users hence multiple avatars in a virtual reality world on the world wide web.

As per claim 2, Lupien discloses further comprising means for recording and storing the interactive trades on computer media(Note abstract and see column 3 lines 62-67 and column 4 lines 1-67 and column 6 lines 30-39 and column 7 lines 5-15 and column 23 lines 20-65).

As per claim 3, The system according to claim 1 further comprising means for supplying selected information to the plurality of traders while in the virtual trading floor space. (Note abstract and see column 3 lines 62-67 and column 4 lines 1-67 and column 6 lines 30-39 and column 7 lines 5-15 and column 23 lines 20-65).

As per claim 4, Lupien discloses further comprising means for enabling a trader to control a corresponding virtual trader persona via signals selected from the group consisting of voice, optical, mechanical, hand, body or head movement. (Note abstract and see column 3 lines 62-67 and column 4 lines 1-67 and column 6 lines 30-39 and column 7 lines 5-15 and column 23 lines 20-65).

As per claim 5, Lupien discloses further comprising means for clearing trades. (Note abstract and see column 3 lines 62-67 and column 4 lines 1-67 and column 6 lines 30-39 and column 7 lines 5-15 and column 23 lines 20-65).

As per claim 6, Lupien discloses further comprising at least one server for generating the virtual trading floor, the plurality of traders networked to and in communication with the server for interaction via voice recognition and/or hand signals so as to simulate a virtual open out call auction system. (Note abstract and see column 3 lines 62-67 and column 4 lines 1-67 and column 6 lines 30-39 and column 7 lines 5-15 and column 23 lines 20-65).

As per claim 7, Lupien discloses providing a method for trading financial products in a virtual reality environment comprising: providing a virtual reality generator for producing 3-dimensional images of a trading floor to generate a virtual reality trading floor(Note abstract and see column 3 lines 62-67 and column 4 lines 1-67 and column 6 lines 30-39 and column 7 lines 5-15 and column 23 lines 20-65).

Lupien fail to explicitly teach providing a plurality of avatars within the virtual reality trading floor corresponding to a plurality of traders;
providing control signals from a trader to a corresponding avatar to direct the corresponding avatar on the virtual reality trading floor;
observing other traders via their corresponding avatars on the virtual reality trading floor; interacting the avatars of the plurality of traders to simulate an open out call auction; and completing trades on the virtual trading floor.

However Brush, II, discloses using the example of the virtual shopping mall, lets assume that an avatar enters the virtual department store. Upon entering the department store his presence is detected by the virtual salesperson. This is implemented using VRML sensors. The salesperson is programmed to, upon detecting the entry of a potential customer, to approach the potential customer and collect information. The salesperson avatar will collect the outwardly observable characteristics of the potential customer avatar and pursue a course of action based on the conclusions drawn from the outwardly observable characteristics. In this example, the salesperson detects that the potential customer is an older middle-class male customer. This can be deduced from clothing choice, hair color or any other physical traits. Based on the salesperson avatar's programming, it will approach the potential customer avatar with a predetermined sales pitch for older males. This predetermined sales pitch may consist of mechanical moves and verbal moves. The predetermined sales pitch of the preferred embodiment begins with walking to within three feet of the potential customer, greeting the potential customer with a smile, saying "Hello, may I help you" and extending the hand for a handshake. The avatar could have been programmed, for example, to extend a hand for a handshake to a male but to engage in additional small-

talk for a woman rather than extending a hand.(see column 7 lines 6-67 and column 8 lines 1-10).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Lupien to include providing a plurality of avatars within the virtual reality trading floor corresponding to a plurality of traders;

providing control signals from a trader to a corresponding avatar to direct the corresponding avatar on the virtual reality trading floor observing other traders via their corresponding avatars on the virtual reality trading floor; interacting the avatars of the plurality of traders to simulate an open out call auction; and completing trades on the virtual trading floor taught by Brush, II, in order to incorporate multiple users hence multiple avatars in a virtual reality world on the world wide web.

As per claim 8, Lupien discloses further comprising recording and storing the interactive trades on computer media(Note abstract and see column 3 lines 62-67 and column 4 lines 1-67 and column 6 lines 30-39 and column 7 lines 5-15 and column 23 lines 20-65).

As per claim 9, Lupien discloses further comprising supplying selected information to the plurality of traders while on the virtual trading floor. (Note abstract and see column 3 lines 62-67 and column 4 lines 1-67 and column 6 lines 30-39 and column 7 lines 5-15 and column 23 lines 20-65).

As per claim 10, Lupien discloses further comprising enabling a trader to control a corresponding avatar via signals selected from the group consisting of voice, optical, mechanical, hand, body or head movement. (Note abstract and see column 3 lines 62-67 and column 4 lines 1-67 and column 6 lines 30-39 and column 7 lines 5-15 and column 23 lines 20-65).

As per claim 10, Lupien discloses further comprising clearing the completed trades. (Note abstract and see column 3 lines 62-67 and column 4 lines 1-67 and column 6 lines 30-39 and column 7 lines 5-15 and column 23 lines 20-65).

As per claim 12, Lupien discloses further comprising generating the virtual trading floor using at least one server, and, networking the plurality of traders with the server.

(Note abstract and see column 3 lines 62-67 and column 4 lines 1-67 and column 6 lines 30-39 and column 7 lines 5-15 and column 23 lines 20-65).

As per claim 13, Lupien discloses wherein the interaction of the avatars is by voice recognition and hand signals so as to simulate a virtual open out call auction. (Note abstract and see column 3 lines 62-67 and column 4 lines 1-67 and column 6 lines 30-39 and column 7 lines 5-15 and column 23 lines 20-65).

As per claim 14, Lupien discloses further comprising providing processing means for coordinating responses on a common virtual time scale, to accommodate transmission delays. (Note abstract and see column 3 lines 62-67 and column 4 lines 1-67 and column 6 lines 30-39 and column 7 lines 5-15 and column 23 lines 20-65).

As per claim 15, Lupien discloses further comprising verifying the identity of each registered user on the trading floor. (Note abstract and see column 3 lines 62-67 and column 4 lines 1-67 and column 6 lines 30-39 and column 7 lines 5-15 and column 23 lines 20-65).

As per claim 16, Lupien discloses further comprising generating and transmitting a report of completed trades to a clearing firm. (Note abstract and see column 3 lines 62-67 and column 4 lines 1-67 and column 6 lines 30-39 and column 7 lines 5-15 and column 23 lines 20-65).

As per claim 17, Lupien discloses further comprising providing information selected from news, product price history, financial charts, and combinations thereof to each registered user.(see column 3 lines 62-67 and column 4 lines 1-67 and column 6 lines 30-39 and column 7 lines 5-15 and column 23 lines 20-65).

As per claim 18, Lupien discloses further comprising monitoring and recording trade activity and reviewing trade activity for rule violations. (Note abstract and see column 3 lines 62-67 and column 4 lines 1-67 and column 6 lines 30-39 and column 7 lines 5-15 and column 23 lines 20-65).

As per claim 19, Lupien discloses further comprising providing at least one server containing 3D visualization software for generating the virtual trading floor and for supporting virtual interactions among the avatars therein. (Note abstract and see

column 3 lines 62-67 and column 4 lines 1-67 and column 6 lines 30-39 and column 7 lines 5-15 and column 23 lines 20-65).

As per claim 20, Lupien discloses further comprising providing multiple servers distributed at locations local to one or more of the plurality of traders, and coordinating the servers to maintain a common virtual trading floor. (Note abstract and see column 3 lines 62-67 and column 4 lines 1-67 and column 6 lines 30-39 and column 7 lines 5-15 and column 23 lines 20-65).

As per claim 21, Lupien discloses further comprising a host computer system for monitoring the multiple servers to assure that the plurality of traders view the same virtual trading floor and avatars at substantially the same time. (Note abstract and see column 3 lines 62-67 and column 4 lines 1-67 and column 6 lines 30-39 and column 7 lines 5-15 and column 23 lines 20-65).

As per claim 22, Lupien discloses a computer trading system for trading financial products comprising: means for creating a virtual environment simulating a trading floor (Note abstract and see column 3 lines 62-67 and column 4 lines 1-67 and column 6 lines 30-39 and column 7 lines 5-15 and column 23 lines 20-65).

Lupien fail to explicitly teach means for providing multiuser registration for accessing the trading floor, means for establishing an iconic representation for each registered user, means for supporting direct interaction between the iconic representation to effect trading interactions; and means for recording and storing the trading interactions.

However Brush, II, discloses using the example of the virtual shopping mall, lets assume that an avatar enters the virtual department store. Upon entering the department store his presence is detected by the virtual salesperson. This is implemented using VRML sensors. The salesperson is programmed to, upon detecting the entry of a potential customer, to approach the potential customer and collect information. The salesperson avatar will collect the outwardly observable characteristics of the potential customer avatar and pursue a course of action based on the conclusions drawn from the outwardly observable characteristics. In this example, the salesperson detects that the potential customer is an older middle-class male customer.

This can be deduced from clothing choice, hair color or any other physical traits. Based on the salesperson avatar's programming, it will approach the potential customer avatar with a predetermined sales pitch for older males. This predetermined sales pitch may consist of mechanical moves and verbal moves. The predetermined sales pitch of the preferred embodiment begins with walking to within three feet of the potential customer, greeting the potential customer with a smile, saying "Hello, may I help you" and extending the hand for a handshake. The avatar could have been programmed, for example, to extend a hand for a handshake to a male but to engage in additional small-talk for a woman rather than extending a hand.(see column 7 lines 6-67 and column 8 lines 1-10).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Lupien to include means for providing multiuser registration for accessing the trading floor, means for establishing an iconic representation for each registered user, means for supporting direct interaction between the iconic representation to effect trading interactions; and means for recording and storing the trading interactions taught by Brush, II, in order to incorporate multiple users hence multiple avatars in a virtual reality world on the world wide web.

As per claim 23, Lupien discloses further comprising a plurality of computer terminals connected thereto for accessing the trading floor. (Note abstract and see column 3 lines 62-67 and column 4 lines 1-67 and column 6 lines 30-39 and column 7 lines 5-15 and column 23 lines 20-65).

As per claim 24, Lupien discloses wherein at least one computer terminal has voice recognition software for repeating vocal statements on the trading floor. (Note abstract and see column 3 lines 62-67 and column 4 lines 1-67 and column 6 lines 30-39 and column 7 lines 5-15 and column 23 lines 20-65).

As per claim 25, Lupien discloses wherein the computer trading system has processing means for coordinating responses on a common virtual time scale, to accommodate transmission delays. (Note abstract and see column 3 lines 62-67 and

column 4 lines 1-67 and column 6 lines 30-39 and column 7 lines 5-15 and column 23 lines 20-65).

As per claim 26, Lupien discloses further comprising means for verifying the identity. of each registered users on the trading floor. (Note abstract and see column 3 lines 62-67 and column 4 lines 1-67 and column 6 lines 30-39 and column 7 lines 5-15 and column 23 lines 20-65).

As per claim 27, Lupien discloses further comprising means to generate and transmit a report of completed trades to a clearing firm. (Note abstract and see column 3 lines 62-67 and column 4 lines 1-67 and column 6 lines 30-39 and column 7 lines 5-15 and column 23 lines 20-65).

As per claim 28, Lupien discloses further comprising means to provide information selected from news, product price history, financial charts, and combinations thereof to each registered user. (Note abstract and see column 3 lines 62-67 and column 4 lines 1-67 and column 6 lines 30-39 and column 7 lines 5-15 and column 23 lines 20-65).

As per claim 29, Lupien discloses further comprising oversight means to monitor trading and to review trade activity for rule violations. (Note abstract and see column 3 lines 62-67 and column 4 lines 1-67 and column 6 lines 30-39 and column 7 lines 5-15 and column 23 lines 20-65).

As per claim 30, Lupien discloses wherein the system has at least one server containing 3D visualization software for generating the virtual trading floor and for supporting virtual interactions among registered users therein. (Note abstract and see column 3 lines 62-67 and column 4 lines 1-67 and column 6 lines 30-39 and column 7 lines 5-15 and column 23 lines 20-65).

As per claim 31, Lupien discloses wherein the system has multiple servers distributed at locations local to one or more registered users, the servers coordinated to maintain the virtual environment. (Note abstract and see column 3 lines 62-67 and column 4 lines 1-67 and column 6 lines 30-39 and column 7 lines 5-15 and column 23 lines 20-65).

As per claim 32, Lupien discloses further comprising a host computer system for monitoring the multiple servers to assure that all registered users view the same virtual environment at substantially the same time. (Note abstract and see column 3 lines 62-67 and column 4 lines 1-67 and column 6 lines 30-39 and column 7 lines 5-15 and column 23 lines 20-65).

Conclusion

6. The prior art of record and not relied upon is considered pertinent to Applicants disclosure.

Liddy Eder (US Patent 6, 026, 388) teaches user interface and other enhancements for natural language information retrieval system and method.

Kohorn US PATENT: 5, 508, 731) teaches generation of enlarged participatory broadcast audience.

7.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clement B Graham whose telephone number is 703-305-1874. The examiner can normally be reached on 7am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hyung S. Sough can be reached on 703-308-0505. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-0040 for regular communications and 703-305-0040 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

CG
January 23, 2006

FRANTZY POINVIL
PRIMARY EXAMINER
AU 3628